bio-protocol Preprint

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Surgical procedure

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An abbreviated version of this protocol was published in Science in Apr 2020

Intravital imaging of mouse embryos

DOI: 10.1126/science.aba0210

Detailed protocol

1. Pregnant female mice were anesthetized using 2% isoflurane with oxygen at 2 L/min.
2. The abdomen was shaved and cleaned with 70% ethanol and iodine.
3. After covering with a sterile field, a round incision was made in the abdomen, removing some of the skin.
4. A midline incision was then made in the abdominal muscle and embryos were removed from the abdominal cavity.
5. An embryo close to the ovary was selected, the embryo was sutured to the abdominal muscle by using 9-0 suture material (Roboz, SUT-1000-21) with Castroviejo needle holder (Roboz, RS-6416).
6. The abdominal muscle was sutured to the window by using 6-0 suture material (Roboz, SUT-1073-11) with Crile-Wood needle holder (Roboz, RS-7860).
7. For embryos before E12.5, a small incision was made by scissors, and the uterine muscle was stripped with 2 forceps (Roboz, RS-5135) to make a round incision. Then the decidua was removed by dipping with wet applicators.
8. The incision was closed by attaching the window frame to the skin using glue (Loctite 406).

How to cite:(Readers should cite both the Bio-protocol preprint and the original research article where this protocol was used)

1. Huang, Q. , Jaenisch, R. and Shen, X. (2021). Surgical procedure. Bio-protocol Preprint. bio-protocol.org/prep1083.
2. Huang, Q., Cohen, M. A., Alsina, F. C., Devlin, G., Garrett, A., McKey, J., Havlik, P., Rakhilin, N., Wang, E., Xiang, K., Mathews, P., Wang, L., Bock, C., Ruthig, V., Wang, Y., Negrete, M., Wong, C. W., Murthy, P. K. L., Zhang, S., Daniel, A. R., Kirsch, D. G., Kang, Y., Capel, B., Asokan, A., Silver, D. L., Jaenisch, R. and Shen, X.(2020). Intravital imaging of mouse embryos . Science 368(6487). DOI: 10.1126/science.aba0210

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